IN THE CLAIMS:

1. (currently amended) In a magnetic resonance apparatus for study of a sample, said apparatus comprising the environment surrounding said sample wherein said environment is characterized by a first value of magnetic susceptibility, ~~An~~ an amorphous composition ~~used in magnetic resonance apparatus, said composition~~ comprising an amorphous matrix, a metal ion selected from the group consisting of Gd^{3+}, Fe^{+3} and Mn^{+2}, and a ligand, said composition having a ~~selected~~ value of magnetic susceptibility substantially equal to said first value at cryogenic temperatures.

2. (original) The composition of claim 1, wherein said ligand binds said metal ion and effects solubility thereof in said amorphous matrix.

3 (original) The composition of claim 2, wherein said metal ion is Gd^{3+} and is in the form of $Gd(Lg)_3$ or, in the alternative, in the form of $Gd(ACAc)_3$, wherein Ac is acetylacetonate, and Lg is 2,2,6,6-tetramethyl-3, 5-heptanedionate.

4. (original) The composition of claim 1, wherein said amorphous matrix comprises epoxy resin.

5. **(withdrawn)** The composition of claim 1, wherein said amorphous matrix comprises a glass.

6. **(withdrawn)** The composition of claim 1, wherein said amorphous matrix comprises a plastic.

7. (currently amended) The composition of claim 1, wherein said composition is characterized by ~~a selected~~ said value of induced magnetization equal to that of another selected material at said cryogenic temperatures for exposure of both said materials ~~by~~ to said applied magnetic field.

8. (currently amended) The composition of claim 1, wherein said ~~selected~~ value of

magnetic susceptibility is zero.

9. (currently amended) The composition of claim 1, wherein said ~~selected~~ value of magnetic susceptibility is reached at a selected temperature below substantially 77°K.

10. (original) The composition of claim 1, wherein said metal ion is Gd^{+3}.

11. (original) A method of preparing an amorphous composition to exhibit a desired susceptibility at cryogenic temperatures, comprising the steps of:

mixing a metal ion selected from the group consisting of Gd^{3+}, Fe^{+3} and Mn^{+2}, with an amorphous matrix and a ligand so that the resulting composition has a nearly zero magnetic susceptibility at said cryogenic temperatures.

12. (original) The method of claim 11, wherein said ligand binds said metal ion and effects solubility thereof in said composition.

13. (original) The method of claim 11, wherein said metal ion is Gd and is in the form selected from the group consisting of $Gd(Lg)_3$ and $Gd(AcAc)_3$, wherein Ac is acetylacetonate, and Lg is 2,2,6,6-tetramethyl-3, 5-heptanedionate.

14 (original) The method of claim 11, wherein said amorphous matrix is epoxy resin.

15. (original) The method of claim 11, wherein said composition has a magnetization equal to the magnetization of another material in the presence of the same magnetic field.

16. (withdrawn) An NMR apparatus comprising a magnet for producing a polarizing field and utilizing a composition subject to said polarizing field, said composition an amorphous comprising a selected amorphous material and a metal ion selected from the group consisting of Gd^{3+}, Fe^{+3} and Mn^{+2}, and a ligand said composition having a selected value of magnetization at cryogenic temperatures.

17. **(withdrawn)** The NMR apparatus of claim 16, wherein said ligand binds said metal ion and effects solubility thereof in said composition.

18. **(withdrawn)** The NMR apparatus of claim 16, wherein said cryogenic temperatures are at or below 77° K.

19. **(withdrawn)** The NMR apparatus of claim 16, wherein said composition is surrounded by a material exhibiting a magnetization of zero and said selected value is zero.